UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE                       | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
|-----------------|-----------------------------------|----------------------|-----------------------|------------------|
| 10/673,932      | 09/29/2003                        | Teck Hu              | 2100.019700           | 1634             |
|                 | 7590 01/29/201<br>IORGAN & AMERSO |                      | EXAMINER              |                  |
|                 | OND, SUITE 1100                   |                      | NGUYEN, KHAI MINH     |                  |
| HOUSTON, 12     | X / / 042                         |                      | ART UNIT PAPER NUMBER |                  |
|                 |                                   |                      | 2617                  |                  |
|                 |                                   |                      | Г                     |                  |
|                 |                                   |                      | MAIL DATE             | DELIVERY MODE    |
|                 |                                   |                      | 01/29/2010            | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|  |   | Application No.                              | Applicant(s)              |  |  |  |  |
|--|---|--|---------------------------|--|--|--|--|
| Office Action Summary  |   | 10/673,932                                   | HU, TECK                  |  |  |  |  |
|  |   | Examiner                                     | Art Unit                  |  |  |  |  |
|  |   | KHAI M. NGUYEN                               | 2617                      |  |  |  |  |
|  | The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  |  |                           |  |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). |   |  |                           |  |  |  |  |
| Status   |   |  |                           |  |  |  |  |
| 1)☑  | Pesnonsive to communication(s) filed on 20 Au   | iquet 2000                                   |                           |  |  |  |  |
| · ·  | Responsive to communication(s) filed on <u>20 August 2009</u> .  This action is <b>FINAL</b> . 2b) ☐ This action is non-final.  |  |                           |  |  |  |  |
| /—   | / <del></del>   |  |                           |  |  |  |  |
| ا ال   | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. |  |                           |  |  |  |  |
|  | closed in accordance with the practice under L  | x parte Quayle, 1935 C.D. 11, 40             | 3 O.G. 213.               |  |  |  |  |
| Dispositi  | on of Claims  |  |                           |  |  |  |  |
| 4)🛛  | ☑ Claim(s) <u>7-13</u> is/are pending in the application.   |  |                           |  |  |  |  |
| ,—   | 4a) Of the above claim(s) is/are withdrawn from consideration.  |  |                           |  |  |  |  |
|  | Claim(s) is/are allowed.  |  |                           |  |  |  |  |
| •  | ☑ Claim(s) <u>7-13</u> is/are rejected.   |  |                           |  |  |  |  |
|  | Claim(s) is/are objected to.  |  |                           |  |  |  |  |
| -  | Claim(s) are subject to restriction and/or  | election requirement                         |                           |  |  |  |  |
| ٥/١  | are subject to restriction and/or   | ciccion requirement.                         |                           |  |  |  |  |
| Applicati  | on Papers   |  |                           |  |  |  |  |
| 9)□  | The specification is objected to by the Examine   | ·.   |                           |  |  |  |  |
|  | 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  |  |                           |  |  |  |  |
| / <b>—</b>   | Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).   |  |                           |  |  |  |  |
|  | Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  |  |                           |  |  |  |  |
| 11)  | 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  |  |                           |  |  |  |  |
|  |   |  |                           |  |  |  |  |
| Priority u   | ınder 35 U.S.C. § 119   |  |                           |  |  |  |  |
| <ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No.</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> </ul>   |   |  |                           |  |  |  |  |
| * S  | See the attached detailed Office action for a list o  | of the certified copies not receive          | d.                        |  |  |  |  |
| Attachmen  | t(s)  |  |                           |  |  |  |  |
|  | e of References Cited (PTO-892)   | 4) Interview Summary                         |                           |  |  |  |  |
|  | e of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Da 5) Notice of Informal Pa |                           |  |  |  |  |
|  | nation Disclosure Statement(s) (PTO/SB/08)<br>r No(s)/Mail Date   | 6) Other:                                    | ατοπε <i>τ</i> τροποσιίση |  |  |  |  |

Application/Control Number: 10/673,932 Page 2

Art Unit: 2617

## **DETAILED ACTION**

## Response to Amendment

- 1. Applicant's arguments with respect to claims 7-13 have been considered but are moot in view of the new ground(s) of rejection.
- 2. Claims 7 and 13 have been amended.

## Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (U.S.Pub-20020003798) in view of Choksi et al. (U.S.Pat-6978144).

Regarding claim 7, Sato teaches a method of wireless communication with a number of subscribers to a subscription-based <u>multicast</u> service <u>that supports a plurality</u> of <u>multicast service subscription types</u>, the method comprising:

determining the number of subscription-based <u>multicast</u> service subscribers within a cell (fig.1, [0026], [0055], [0060]-[0061], [0102]);

determining at least one of a geographical distribution of a number of multicast service subscribers a subscription distribution of the number of multicast service subscribers within the cell (fig.1: ES, [0026], [0055], [0060]-[0062], [0102]);

determining a multicast service subscription type of each of the multicast service subscribers (fig.1: ES, [0026], [0055], [0060]-[0062]) and...;

assigning a different multicast service rate to each of the multicast service subscription types based on said at least one geographical distribution or subscription distribution ([0033], [0061]-[0062], [0103] (i.e., different transmission rates, different timeslot positions, etc.)), the multicast subscription types of the plurality of multicast service subscribers ([0098], [0103]), and the individual subscriber information of each of the multicast service subscribers ([0033], [0061]-[0062] based on the request signal received from each wireless terminal,... the wireless base station determines how to deliver the requested multicast information); and

multicasting information to each of the multicast service subscribers at the multicast service rate assigned to the multicast service subscription type of each of the multicast service subscribers ([0033], [0061]-[0062], [0103] (i.e., different transmission rates, different timeslot positions, etc.)).

Sato fails to specifically disclose <u>determining individual subscriber information</u>

<u>comprising at least one of a power requirement desired content or all equipment class</u>

of each of the multicast service subscribers.

However, Choksi teaches <u>determining individual subscriber information (col.1, lines 48-59)</u> comprising at least one of a power requirement desired content or all equipment class of each of the multicast service subscribers (fig.3, col.1, line 48 to col.2, line 14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply to the teaching of Choksi to Sato to deliver differentiated tiered services to mobiles user on the cell.

Art Unit: 2617

Regarding claim 8, Choksi further teaches scaling an availability of at least one of the multicast service subscription types in response to a demand from the multicast service subscribers associated with at least another multicast service subscription type (fig.3, col.1, line 48 to col.2, line 14).

Regarding claim 9, Choksi further teaches wherein the step of scaling comprises at least one of dropping and adding the availability of at least one of the multicast service subscription types (fig.3, col.1, line 48 to col.2, line 14).

Regarding claim 10, Choksi further teaches the demand corresponds with at least one of power (fig.3, col.1, line 48 to col.2, line 14).

Regarding claim 11, Choksi further teaches scaling an availability of at least one of the multicast service subscription types in response to base station resources in use (fig.3, col.1, line 48 to col.2, line 14).

Regarding claim 12, Choksi further teaches the step of scaling comprises at least one of dropping and adding the availability of at least one of the multicast service subscription (fig.3, col.1, line 48 to col.2, line 14).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (U.S.Pub-20020003798), in view of Choksi et al. (U.S.Pat-6978144), and further in view of Khan et al. (U.S.Pat-6400954).

Regarding claim 13, Sato teaches assigning the different multicast service rates comprises assigning the different multicast service rate to support multicasting ([0033], [0061]-[0062], [0103] (i.e., different transmission rates, different timeslot positions, etc.)),

Choksi further teaches information to at least one of a maximum number of multicast service subscribers (fig.3, col.1, line 48 to col.2, line 14),

Sato and Choksi fail to specifically disclose a maximum number of multicast service subscribers having a premium service type, and a maximum number of multicast service subscribers having a basic service type.

However, Khan teaches a maximum number of multicast service subscribers having a premium service type (fig.1 and 3, col.5, line 63 to col.6, line 7, and col.6, lines 26-64), and a maximum number of multicast service subscribers having a basic service type (fig.1 and 3, col.5, line 63 to col.6, line 7, and col.6, lines 26-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply to the teaching of Khan to Sato and Choksi to provide method designers search for ways to efficiently transfer data information to and from mobile users and, in particular, to provide high data rate transfer capability

## Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI M. NGUYEN whose telephone number is (571)272-7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571.272.7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/673,932 Page 7

Art Unit: 2617

Supervisory Patent Examiner, Art Unit 2617

/Khai M Nguyen/ Examiner, Art Unit 2617

1/22/2010